INDEX TO VOLUME XXXVI, 1924.

PAGE

Admiral Benson's Proposals 129
Air Compressor, Increasing the Speed of, Reduces Capacity 85
Aircraft Carriers, British Navy 93
Aircraft Design 86
Airplanes, Notes on Geometrical Similarity in 707
Airship, The Italian Semi-Rigid *Mr* 712
Airships, Compensation in Weight of Fuel Consumption of 309
Alexander, J. T., Lieutenant Commander, U. S. N., U. S. S. *Milwaukee*, Description and Official Trials 513
Aluminum Alloy Connecting Rods 526
Aluminum and Aluminum Alloys for Use on Board Ship, by E. M. Hewlett, and D. Basch ..... 1 and 288
Analysis of Modern Plant and Application to Ship Propulsion 536
Arc Welder for Ship Work and New Galley Range 100
Armature Coils, Types of. Direct-Current Armatures 527
Association Notes 138, 348, 549, 714
A Study of the Oxygen-Oil Explosion Hazard, by Mayo Dyer Hersey 231
Automatic Log and Course Tracer of Lieut. Baule 311
Bagnulo Oil Engine 523
Balancing L. P. Turbine Rotor on Board U. S. S. *Detroit*, by Comdr. H. C. Dinger, U. S. Navy, Member 648
Balancing, Static and Dynamic 99
Balancing Turbine Rotors of the Scout Cruiser *Raleigh*, Discussion of paper by Commander Carlos Bean, U. S. N., in February, 1924, issue of JOURNAL OF AMERICAN SOCIETY OF NAVAL ENGINEERS, by P. B. Dungan, Captain, U. S. N. 302
Balancing Turbine Rotors of Scout Cruiser *Raleigh*, Method of, by Carlos Bean, Commander, U. S. N. 30
Balancing Turbine Rotors of the Scout Cruiser *Raleigh*, Reply to discussion by Captain P. B. Dungan, U. S. N. of paper by Commander Bean in February, 1924, issue of JOURNAL OF AMERICAN SOCIETY OF NAVAL ENGINEERS, by Carlos Bean, Commander, U. S. N. 305
Ball Bearings for Motors, by C. Huey 624
Basch, D., Aluminum and Aluminum Alloys for Use on Board Ship (With E. M. Hewlett) ..... 1 and 288
Baule, Lieut., Course Tracer and Automatic Log of 311
Bean, Carlos, Commander, U. S. N., Heat Treatment of Nickel Steel Turbine Blading 494
Bean, Carlos, Commander, U. S. N., Method of Balancing Turbine Rotors of Scout Cruiser *Raleigh* 30

Bean, Carlos, Commander, U. S. N., Reply to Discussion of Captain P. B. Dungan, U. S. N., of Commander Bean's paper on Balancing the Turbine Rotors of Scout Cruiser *Raleigh* in February, 1924, issue of JOURNAL OF AMERICAN SOCIETY OF NAVAL ENGINEERS 305
Benson Super High-Pressure Generator 324
Bethlehem Corporation Producing Plant Mills Direction Indicator 100
Bibby Flexible Couplings Manufactured by Falk Corporation 101
Blading, Turbine, Nickel Steel, Heat Treatment of, by Commander Carlos Bean, U. S. N. 494
"Blue Riband of the Atlantic," What It Costs 682
Boiler Efficiency with Pre-Heated Air 526
Bow for a Salved Steamship, New, Launching 132
Breaking Up Large Masses of Steel 94
British Navy Aircraft Carriers 93
Burgess, C. P., The Rigid Airship *ZR-3* 553
Burners, Fuel Oil, Individual Forced Draft, by Lieut. Commander A. M. Charlton, U. S. N. 208
Canoose, Lieut. (J. G.), U. S. N., Some Effects of Fuel Measuring Pump Design on Diesel Engine Performance 573
Capsized Ship, Righting 129
Castings, Reinforced Gray-Iron 337
Charlton, A. M., Lieut. Commander, U. S. N., Individual Forced Draft Fuel Oil Burners 208
Coal, Spontaneous Combustion of, Factors in 106
Cold Storage Compartments, Temperature Indicator for 103
Commutators, Pointers on Maintenance 99
Compensation in Weight of Fuel Consumption of Airships 309
Compressors, Refrigeration, Lubrication of 335
Condensers, Surface, of the Ginabout Type 675
Connecting Rods, Aluminum Alloy 526
Continuous Flow Evaporator, by M. C. Stuart 55
Contra-Propeller, First British Motorship With 661
Controversy, An Old, Revived 692
Convenient Analysis of Modern Plant and Application to Ship Propulsion 536
Conversion, Interesting 104
Corrosion of Steel Shafting, Protection of from by Rubber Sleeves, by Commander Paul E. Dampman, U. S. N. 282
Couplings, Bibby Flexible, Manufactured by Falk Corporation 101
Course Tracer and Automatic Log of Lieut. Baule 311
Crankshafts, Stress Distribution in and its Relation to Crankshaft Failures, by D. J. McAdam, Jr., and G. F. Wohlgemuth 244
Dampman, Paul E., Commander, U. S. N., Rubber Sleeves for the Protection of Steel Shafting from Corrosion 282
Diagnosis of Diesel-Engine Defects from Indicator Diagrams 532
Diamond Soot Blowers, Tests of, by H. H. Norton, Lieut. Commander, U. S. N. 42

Diesel Engine Cooling 695
Diesel Engine Defects, Diagnosis of Defects from Indicator Diagrams 532
Diesel Engine, The 696
Diesel Engine, Two Cycle, Performance 707
Diesel-Engine Lubrication 701
Diesel-Engined Motor Car Ferry 84
Diesel Engine, 2,000 Horsepower Double-Acting, North British 99
Diesel Engine Performance, Some Effects of Fuel Measuring Pump Design on, by Lieut. (J. G.) J. E. Canoose, U. S. N. 573
Diesel Oil, Filtering 340
Dinger, Comdr. H. C., U. S. Navy, Member, Balancing L. P. Turbine Rotor on Board U. S. S. *Detroit* 648
Direct-Current Armatures, Reconnecting; Types of Armature Coils 527
Directive Type of Radio Beacon and Its Application to Navigation 341
Discussion of Paper in August, 1924, issue of JOURNAL, by Lieut. Edward Ellsberg, U. S. N., on Low Pressure Evaporators, by S. Morris Lillie 655
Discussion, of paper in February, 1924, issue of JOURNAL OF AMERICAN SOCIETY OF NAVAL ENGINEERS, by Commander Carlos Bean, U. S. N., on Balancing Turbine Rotors of Scout Cruiser *Raleigh*, by P. B. Dungan, Captain, U. S. N. 302
Double-Acting Engine, The M. A. N. 704
Ducey, D. F., Lieutenant Commander, U. S. N., U. S. S. *Medusa*, Description of Vessel Designed and Built for Fleet Repair Work 377
Dungan, P. B., Captain, U. S. N., Discussion of Paper in February, 1924, issue of JOURNAL OF AMERICAN SOCIETY OF NAVAL ENGINEERS, by Commander, Carlos Bean, U. S. N., on Balancing Turbine Rotors of Scout Cruiser *Raleigh* 302
Dynamic and Static Balancing 99
Economy of Fuel Through Intelligent Operation 319
Efficiency, Boiler, with Pre-heated Air 526
Electric Light Extremes 530
Electric Motor, 10,000 R. P. M. 342
Ellsberg, Edward, Lieutenant (CC), U. S. N., Low Pressure Evaporators, Submerged Type 434
Engineering Competition, Rules for, and Engineering Performances, by Commander C. H. J. Keppler, U. S. N. 181
Engineering, Marine, Situation 126
Engineering Performances and the Rules for Engineering Competition, by Commander C. H. J. Keppler, U. S. N. 181
Evaporator, Continuous Flow, by M. C. Stuart 55
Evaporators, Low Pressure, Submerged Coil Type, by Lieutenant Edward Ellsberg (CC), U. S. N. 434
Factors in the Spontaneous Combustion of Coal 106
Filtering Diesel Oil 340
Flettner Rudder on Motor Ships 315

Flexible Couplings, Bibby, Manufactured by Falk Corporation 101
Floating Dock, 4,500 Ton, Launch of 531
Forced Draft Fuel Oil Burners, Individual, by Lieut. Commander A. M. Charlton, U. S. N 208
Four Thousand Five Hundred Ton Floating Dock, Launch of 531
Fuel Consumption of Airships, Compensation in Weight of 309
Fuel Economy Through Intelligent Operation 319
Fuel Measuring Pump, Some Effects of Design on Diesel Engine, by Lieut. (J. G.) J. E. Canoose, U. S. N 573
Fuel Oil Burner, Rotary, Ray 322
Fuel Oil Burners, Individual Forced Draft, by Lieut. Commander A. M. Charlton, U. S. N 208
Galley Range, New, and Arc Welder for Ship Work 100
Gas Turbine 321
Generator, Benson Super High-Pressure 324
Gray-Iron Castings, Reinforced 337
Gromer, J. G. B., Lieut. Commander, U. S. N., U. S. S. *Omaha*, Description of Machinery Installation and Official Trials 143
Heat Balance of a Power Plant 118
Heat Transmission, Research in 544
Heat Treatment of Nickel Steel Turbine Blading, by Commander Carlos Bean, U. S. N 494
Heavy Oil Engines, High-Powered 87
Hersey, Mayo Dyer, A Study of the Oxygen-Oil Explosion Hazard 231
Hewlett, E. M., Aluminum and Aluminum Alloys for Use on Board Ship (With D. Basch) ..... 1 and 288
High-Powered Heavy Oil Engines 87
Hints on the Operation of the Orsat Apparatus 120
Howard, H. S., Commander (CC), U. S. N., Worm Gears and Windlasses 18
How trial Speeds are Affected 121
Huey, C., Ball Bearings for Motors 624
Hydraulic Transmission System, Lenz 343
Increasing the Speed of Air Compressor Reduces Capacity 85
Individual Forced Draft Fuel Oil Burners, by Lieut. Commander A. M. Charlton, U. S. N 208
Industry, The Navy's Contribution to 91
Interesting Conversion 104
Joints, Pipe, for High Pressures and Temperatures 687
Keller, H. R. Lieut. Commander, U. S. N., U. S. S. *Raleigh*, Description and Trials 466
Keppler, C. H. J., Commander, U. S. N., Engineering Performance and the Rules for Engineering Competition 181
Largest Motor Ship in the World 128
Largest Steamer Conversion 338
Launch of a 4,500-Ton Floating Dock 531

Launching a New Bow for a Salved Steamship 132
Lenz Hydraulic Transmission System 343
Level Indicator, Remote 84
Lignum Vitae Obsolete for Stern Bearings 317
Lillie, S. Morris, Discussion of Paper in August, 1924, issue of JOURNAL by Lieut. Edward Ellsberg on Low Pressure Evaporators 655
Low Pressure Evaporators, Submerged Coil Type, by Lieutenant Edward Ellsberg (CC) U. S. N. 434
L. P. Turbine Rotor on Board U. S. S. *Detroit*, Balancing, by Comdr. H. C. Dinger, U. S. Navy, Member 648
Lubrication of Refrigeration Compressors 335
Main Steam Pipes, A Note on 124
Maintenance of Commutators, Pointers on 88
Marine Oil Engine Design, Tendency of 339
Marine Engineering Situation, The 126
Marine Oil Engines, Utilization of Waste Heat in 325
Mathematical Chart, by E. L. Rice 66
McAdam, D. J., Jr., Stress Distribution in Crankshafts and its Relation to Crankshaft Failures (With G. F. Wohlgemuth) 244
McMillan, C. C., Lieutenant, U. S. C. G., Practical Solution of Some Shipboard Problems 34
Medusa, U. S. S., Description of Vessel Designed and Built for Fleet Repair Work, by Lieut. Commander D. F. Ducey, U. S. N. 377
Method of Balancing Turbine Rotors of Scout Cruiser *Raleigh*, by Carlos Bean, Commander, U. S. N. 30
Milwaukee, U. S. S., Description and Official Trials, by Lieut. Commander J. T. Alexander, U. S. N. 513
Mooring Mast Is the Thing 307
Motor Car Ferry, Diesel-Engined 84
Motor Ships, Flettner Rudder on 315
Motor Ship, The Largest in the World 128
Motors, Ball Bearings for, by C. Huey 624
New Variable Speed Gear 345
Nickel Steel Turbine Blading, Heat Treatment of, by Commander Carlos Bean, U. S. N. 494
No-Men and Yes-Men 122
North British 2,000 Horsepower Double-Acting Diesel Engine 99
Norton, H. H., Lieutenant Commander, U. S. N., Tests of Diamond Soot Blowers 42
Novel Features of a Large Turbine 334
Oil-Burner, Fuel, Rotary, Ray 322
Oil, Diesel, Filtering 340
Oil Engine, Bagnulo 523
Oil Engine Drive, Geared, Parsons Turbine Company Proposes 87
Oil Engine, Marine, Tendency of Design 339
Oil Engines, Heavy, High-Powered 87

Oil Engines, Marine, Utilization of Waste Heat in 325
Oil From Coal 334
Oil Separator, The "Rocket" 134
Omaha, U. S. S., Description of Machinery Installation and Official Trials, by Lieut. Commander J. G. B. Gromer, U. S. N 143
Orsat Apparatus, Hints on Operation of 120
Oxygen-Oil Explosion Hazard, A Study of, by Mayo Dyer Hersey 231
Parsons Turbine Company Proposes Geared Oil Engine Drive 87
Pipes, Main Steam, A Note on 124
Plant Mills Direction Indicator, Bethlehem Corporation Producing 100
PN-7 Boat Seaplane, Description and Performance by Lieut. Commander E. E. Wilson, U. S. N 351
Pointers on the Maintenance of Commutators 88
Power Plant, A Unique, Steam at 1200 degrees F 680
Power Plant, Heat Balance of 118
Power Plant Piping, Use of Welding in 109
Practical Solution of Some Shipboard Problems, by C. C. McMillan, Lieutenant, U. S. C. G 34
Propeller Design, Tendency of Airship 693
Radio Beacon, Directive Type, and Its Application to Navigation 341
Raleigh, U. S. S., Balancing Turbine Rotors of, Discussion of Paper by Commander Carlos Bean, U. S. N., in February, 1924, issue of JOURNAL OF AMERICAN SOCIETY OF NAVAL ENGINEERS, by P. B. Dungan, Captain, U. S. N 302
Raleigh, U. S. S., Balancing Turbine Rotors of, Reply to discussion by Captain P. B. Dungan, U. S. N., of paper by Commander Bean in February, 1924, issue of JOURNAL OF AMERICAN SOCIETY OF NAVAL ENGINEERS, by Carlos Bean, Commander, U. S. N 305
Raleigh, U. S. S., Description and Trials, by Lieut. Commander H. R. Keller, U. S. N 466
Raleigh, U. S. S., Method of Balancing Turbine Rotors of, by Carlos Bean, Commander, U. S. N 30
Ray Rotary Fuel Oil Burner 322
Reconnecting Direct-Current Armatures, Types of Armature Coils 527
Refrigeration Compressors, Lubrication of 335
Reinforced Gray-Iron Castings 337
Remote Level Indicator 84
Repairing the *Shenandoah* 546
Reply to discussion of Captain P. B. Dungan, U. S. N., of paper in February, 1924, issue of JOURNAL OF AMERICAN SOCIETY OF NAVAL ENGINEERS, by Commander Bean, on Balancing Turbine Rotors of Scout Cruiser *Raleigh*, by Carlos Bean, Commander, U. S. N 302
Research in Heat Transmission 544
Rice, E. L., Mathematical Chart 66
Righting a Capsized Ship 129
Rigid Airship, the *ZR-3*, by C. P. Burgess 553

"Rocket" Oil Separator, The 134
Rods, Connecting, Aluminum Alloy 526
Rubber Sleeves for the Protection of Steel Shafting from Corrosion, by Commander Paul E. Dampman, U. S. N 282
Rudder, Flettner, on Motor Ships 315
Rudder, The New 3-Plane Flettner 661
Sandblasting in the Power Plant 527
Seaplane, Boat, The *PN-7*, Description and Performance, by Lieut. Commander E. E. Wilson, U. S. N 351
Semi-Steel Characteristics 340
Separator, Oil, The "Rocket" 134
Shafting, Steel, Protection of from Corrosion by Rubber Sleeves, by Commander Paul E. Dampman, U. S. N 282
Shenandoah, The, U. S. Airship, Repairing 546
Sherardizing; Its Inception and Development 676
Shipboard Problems, Practical Solution of, by C. C. McMillan, Lieutenant, U. S. C. G 34
Sleeves, Rubber, for the Protection of Steel Shafting from Corrosion, by Commander Paul E. Dampman, U. S. N 282
Soot Blowers, Diamond, Tests of, by H. H. Norton, Lieut. Commander, U. S. N 42
Speed, Trial, How Affected 121
Speeds, High, at Sea 690
Spontaneous Combustion of Coal, Factors in the 106
Standardizing Conference, First Pan-American, Heralds Great Advance 674
Static and Dynamic Balancing 99
Steam Appliances of Royles, Ltd., Useful 95
Steamer Conversion, Largest 338
Steam Pipes, Main, A Note on 124
Steel, Breaking up Large Masses of 94
Steel Shafting, Protection of from Corrosion, by Rubber Sleeves, by Commander Paul E. Dampman, U. S. N 282
Stern Bearings, Lignum-Vitae Obsolete for 317
Stress Distribution in Crankshafts and Its Relation to Crankshaft Failures, by D. J. McAdam, Jr., and G. F. Wohlgemuth 244
Stuart, M. C., Continuous Flow Evaporator 55
Submarine Construction 675
Submarine Construction, Italian Theories 678
Submarine Conversion, Unique 530
Submerged Coil Type Low Pressure Evaporators, by Lieutenant Edward Ellsberg (CC), U. S. N 434
Super High Pressure Generator, Benson 324
Temperature Indicator for Cold Storage Compartments 103
Tendency of Marine Oil Engine Design 339
10,000 R. P. M. Electric Motor 342

Tests of Diamond Soot Blowers, by H. H. Norton, Lieut. Commander, U. S. N. ... 42
The Navy's Contribution to Industry ... 91
Transmission of Heat, Research in ... 544
Trials, *Milwaukee*, U. S. S., by Lieutenant Commander J. T. Alexander, U. S. N. ... 513
Trials, *Raleigh*, U. S. S., by Lieut. Commander H. R. Keller, U. S. N. 466
Trial Speeds, How Affected ... 121
Trials, U. S. S. *Omaha*, by Lieut. Commander J. G. B. Gromer, U. S. N. ... 143
Turbine Blading, Nickel Steel, Heat Treatment of, by Commander Carlos Bean, U. S. N. ... 494
Turbine Disks, Steam, Vibration in ... 543
Turbine, Gas ... 321
Turbine, Large, Novel Features of a ... 334
Turbine Rotors of Scout Cruiser *Raleigh*, Balancing, Discussion of paper by Commander Carlos Bean, U. S. N., in February, 1924, issue of JOURNAL OF AMERICAN SOCIETY OF NAVAL ENGINEERS, by P. B. Dungan, Captain, U. S. N. ... 302
Turbine Rotors of Scout Cruiser *Raleigh*, Balancing, Reply to discussion by Captain P. B. Dungan, U. S. N., of paper by Commander Bean in February, 1924, issue of JOURNAL OF AMERICAN SOCIETY OF NAVAL ENGINEERS, by Carlos Bean, Commander, U. S. N. ... 305
Turbine Rotors of Scout Cruiser *Raleigh*, Method of Balancing of, by Carlos Bean, Commander, U. S. N. ... 30
Turbines, Water in ... 122
Unique Submarine Conversion ... 530
Useful Steam Appliances of Royles, Ltd ... 95
Utilization of Waste Heat in Marine Oil Engines ... 325
Vacuum, The—There's Something In It ... 664
Variable Speed Gear, New ... 345
Vibration in Steam Turbine Disks ... 543
Waste Heat in Marine Oil Engines, Utilization of ... 325
Water in Turbines ... 122
Welder, Arc, for Ship Work and New Galley Range ... 100
Welding in Power Plant Piping, Use of ... 109
Wilson, E. E., Lieutenant Commander, U. S. N., The *PN-7* Boat Seaplane, Description and Performance ... 351
Windlasses and Worm Gears, by H. S. Howard, Commander (CC), U. S. N. ... 18
Wohlgemuth, G. F., Stress Distribution in Crankshafts and Its Relation to Crankshaft Failures (with D. J. McAdam, Jr.) ... 244
Worm Gears and Windlasses, by H. S. Howard, Commander (CC) U. S. N. ... 18
Yes-Men and No-Men ... 122
ZR-3, The Rigid Airship, by C. P. Burgess ... 553